

Appl. No.: 10/053,329
Amendment dated June 21, 2005
Reply to Office Action mailed January 25, 2005

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph that starts on page 12 and begins with the phrase "Figure 8 is an illustration" with the following paragraph.

Figure 8 is an illustration of an alternative embodiment of a three dimensional electrode array having a lumen 800 for directing the trajectory of the electrical leads of the present invention. As noted above, the leads can be replaced with catheters. Lumen 800 is permanently introduced into the brain parenchyma to a region roughly in the center of the volume of brain the user wishes to influence. Lumen 800 has a proximal end 805 for accepting one or more leads 815-818A and a distal end 810 having openings 815-818 for directing leads 815A-818A in accordance with a desired trajectory. Ends of leads 815A-818A may protrude from openings 815-818 as needed to achieve the desired geometric configuration. It is preferred that leads 815A-818A protrude out from openings 815-818 along a predetermined trajectory. Advantageously, the present invention avoids any slicing movements of the leads 815A-818A while moving outwardly from the central axis of lumen 800 thereby minimizing any risks of damage or bleeding to the brain tissue. Optionally, leads 815A-818A may be made of a silicon material having a predetermined bend or memory along its body to ensure that leads 815A-818A project an opening at the desired angle.

Please replace the paragraph that starts on page 19 and begins with the phrase "Referring back to Figure 11" with the following paragraph.

Referring back to Figure 11, the present invention may also be implemented within a drug delivery system. In this embodiment, the therapy delivery device is a pump 10A and the therapy delivery element is a catheter 23. A therapy delivery device or pump 10A made in accordance with the preferred embodiment may be implanted below the skin of a patient. The device has a port 27 into which a hypodermic needle can be inserted through the skin to inject a quantity of a liquid agent, such as a medication or drug. The liquid agent is delivered from the

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pump 10A through a catheter port 20A into a therapy delivery element or a catheter 23. Catheter 23 is positioned to deliver the agent to specific infusion sites in a brain (B). Pump 10A may take the form of the device numbered 10 that is shown in U.S. Patent No. 4,692,147 (Duggan), assigned to Medtronic, Inc., Minneapolis, Minnesota, which is incorporated by reference in its entirety. Settings of the pump 10A, such as frequency of delivery of medication and amount of medication to be delivered, can be adjusted to obtain the intended effect.

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